

In the claims:

Claims 1-4 (cancelled)

Claim 5 (previously amended): An antibody fragment according to claim 12 wherein the polymer is selected from the group consisting of methoxy(polyethylene glycol) and derivatives of methoxy(polyethylene glycol).

Claims 6-8 (cancelled)

Claim 9 (previously amended): An antibody fragment according to claim 12 covalently attached to one or more reporter molecules.

Claim 10 (previously amended): A composition comprising a monovalent antibody fragment according to claim 12 together with one or more pharmaceutically acceptable excipients, diluents or carriers.

Claim 11 (previously added): The monovalent antibody fragment of claim 12, wherein the antigen-binding fragment is an Fab' fragment.

Claim 12 (currently amended): A polymer modified monovalent antibody fragment, wherein said fragment comprises a heavy chain and a light chain, wherein

said heavy chain comprises a VH domain covalently linked at its C-terminus to a CH1 domain extended to provide a hinge region domain, said hinge region domain comprising not more than one cysteine residue;

said light chain comprising a VL domain, which is complementary to the VH domain, covalently linked at its C-terminus to a CL domain;

where not more than one polymer molecule is covalently attached to the monovalent antibody fragment, said polymer molecule is linked to said cysteine residue in said hinge region domain of said heavy chain;

and wherein said polymer has an average molecular weight range from 25,000Da to 40,000 Da and is an optionally substituted, straight or branched chain polymer selected from the group consisting of poly(ethylene glycol), polypropylene glycol, poly (vinyl alcohol) and derivatives thereof.

Claim 13 (previously added): An antibody fragment according to claim 12 covalently attached to one or more effector molecules.

Claim 14 (previously added): The fragment of claim 13, wherein the effector molecule is an antineoplastic agent, toxin, enzyme, nucleic acid, radionuclide, or chelated metal.

Claim 15 (previously added): The fragment of claim 9, wherein the reporter molecule is a chelated metal, fluorescent compound, or a compound detected by nuclear magnetic resonance spectroscopy or electron spin resonance spectroscopy.

Claim 16 (previously added): The fragment of claim 12 wherein the fragment binds a soluble antigen.

Claim 17 (currently amended): The fragment of claim 16 9 wherein the soluble antigen is an interleukin, viral antigen, immunoglobulin, interferon, tumor necrosis factor, a colony stimulating factor, or a platelet derived growth factor, or a receptor thereof.

Claim 18 (cancelled)

Claim 19 (currently amended): The fragment of claim 12 wherein a variable region domain of the fragment comprises ~~at least one~~ complementary determining regions from one antibody and the remainder of the variable region domain from a second antibody.
